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ABSTRACT

In a world of continuous change directly related to information technology, it is incumbent on faculty in higher education to share tools and ideas that foster effective teaching and learning experiences for students. This paper discusses four areas which should be addressed when teaching computer literacy: (1) establish computer literacy requirements and be willing to re-evaluate them yearly; (2) determine the mix of computer skills in each introductory computer class; (3) work toward building community in each class; and (4) have a long list of practical activities to enhance class interest. Suggestions for hardware, software and other activities are provided. (AEF)

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Putting the Sizzle Back Into Computer Literacy

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Abstract

Computer literacy is defined using the mission of the college or university and the mission of the department that offers literacy courses. In addition, each department within the individual schools should collaborate on developing content and objectives for introductory courses. Various methods and hands-on activities are discussed. Since change is inevitable and ongoing, it is incumbent on faculty in higher education to share tools and ideas that foster effective teaching and learning experiences for our students.

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PUTTING THE SIZZLE

BACK INTO

COMPUTER LITERACY

"Many of the changes taking place in our world today are directly related to information technology. A radical shift in information technology has taken place just in the past few years. It is most obviously seen in the burst of attention given to the *Internet.*" (Baumann & Flynn, 1996, p.xi) With all these changes, how can faculty keep up with the cutting edge in planning and teaching our introductory courses? There are four main areas to address with regards to teaching computer literacy. They are as follows: establish computer literacy requirements and be willing to re-evaluate them yearly, determine the mix of computer skills in each of your introductory computer classes, work toward building community in each class, and have a long list of practical hands-on activities to enhance class interest.

In most colleges and universities computer literacy is required of all graduates. The content of this literacy and which schools or departments offer courses to satisfy the requirement vary greatly. I believe a first step in defining what constitutes the computer literacy requirement is to examine the university mission and the department mission to establish what end result a graduate is required to meet. At Christian Brothers University, the Information Technology Management department used

collaboration between accounting, economics/finance, management, and marketing in order to establish guidelines for basic computer skills. This yields an approach that is more theoretical than software specific to establish concept learning.

We seek to train business students in their freshman courses to use computer tools and applications that they can employ to solve business problems in upper level courses. In addition, we introduce basic trends in telecommunications: the *Internet*, e-mail, local area networks. Future plans at Christian Brothers support requiring entering freshman to purchase their own computer equipment. The first step should be that each department establish their outcomes for literacy courses and develop means that will measure that attainment. We must all be accountable.

Secondly, evidence at Christian Brothers University supports the improved computer literacy of incoming freshman (Wade, 1991). There is a growing divergence of knowledge that entering freshmen bring to an introductory computer literacy class. When I survey my incoming classes on the first day, I find that approximately one third of them do not own computers, have never used them in high school or on part-time jobs. The remaining two-thirds of students have taken one or more computer classes in high school and have access to a computer at home complete with modem, *Internet* service, CD-ROM player and color printer. This growing disparity makes our job harder. We must incorporate activities that interest and yet motivate "haves" and educate "have nots" to a point that is entry level acceptable.

The third point does not directly involve computer literacy. It is important to

establish the class as a community (Ritschel, 1995). Freshmen and even sophomores come to college with different needs than juniors and seniors. For example they need more frequent exams which cover shorter amounts of material than do upper classmen. This is due in part because it is the method used in high schools. CBU studies show that universities and colleges lose 20-35% of incoming freshman and 18-25% of second year students (Burk, 1996). Raising retention figures for freshman and sophomores is often linked to establishing community.

CBU RETENTION STATISTICS

Freshmen Entering Fall of	Percent Retained
1992-93	54.9%
1993-94	67.5%
1994-95	68.7%
1995-96	89.7%

As you can see, CBU's efforts to raise retention rates are very successful (Burk,1996, p.2) The techniques discussed on previous pages really work.

I recently attended a conference at the University of South Carolina, Columbia, South Carolina. The conference was titled "The Freshman Year Experience". The information I gained is invaluable. A few of the more important conclusions were: establish a center for freshmen advising; provide tutoring centers for subjects such as math and English; offer sessions on how to study, how to take notes, and how to take

tests on different course content, i.e. math, history, biology.

"How can we claim that a primary focus of lower division courses is on teaching if many of our instructors ignore more effective means of enabling students to become better learners?" (Ritschel, 1995, p.18). I believe that until group-building, team-building, or community establishment takes root in our classes, nothing else we do will help students to progress toward the objectives we set for our classes.

Below is a list of suggestions that have been successful in my introductory classes. Practice techniques that encourage cooperation and community among students.

- try to find out about each student's learning styles, interests, or backgrounds at the beginning of each course.
- learn students' names as quickly as possible.
- ask students to learn each other's names.
- ask students to tell each other about their interests and backgrounds.
- encourage students to do projects together.
- ask students to help one another in class with learning software techniques.
- encourage students to ask questions.
- try to be supportive of a student's success, however small.
- be available for help outside class.

Even small efforts in the area of building community reap large returns. (Gardner,

1996).

If you have established computer literacy requirements, surveyed your classes as to their background computer skills, and started building community in each class, you are ready to incorporate hands-on activities that put ***SIZZLE*** in your introductory computer literacy classes.

There are specific activities to accomplish these objectives. First take your introductory computer class to the library at the beginning of the semester to learn how to use the computerized library facilities. This may include online searches for library holdings or using CD-ROM databases to search for current periodicals and articles. Include "how-to" instructions for using the library's computer equipment and directions on how to dial into the library from an on or off-campus computer. It is imperative that students learn to search databases and assimilate information to be successful in other classes. However you accomplish these tasks is not critical, but making sure you do them is important to the successful literacy of the student.

Another activity is a direct result of CBU requiring writing across the curriculum. Students in my classes must locate an article about some aspect of computers, read it, summarize it, and hand in a one to two page report followed by their opinion of the information. These are due weekly. Students discuss their article in class. This builds community and serves as a learning tool for them and for me. Student evaluations indicate that this exercise more than any other builds the habit of reading journals, magazines, and other library resources.

The remaining suggestions have been grouped into these areas: hardware activities, software activities, and other activities.

Hardware activities

- take apart a telephone and study the parts
- discuss analog and digital signals
- meet in the engineering lab and let students speak into a microphone and observe analog voice waves on an oscilloscope
- invite speaker from the local phone company to talk about analog and digital phone lines, costs, capacity, and trends
- invite cellular technology provider to speak
- supply two video telephones; students divide into groups and call each other
- discuss various issues surrounding caller-id, ANI
- communications media - bring fiber optic cable, twisted pair, coaxial cable to class
- tour central office of local phone company

- invite speaker from the city government or power company to discuss fiber optic backbone around the city and how companies collaborated on the project; what will it do for the city?
- student goes to city officials in charge of 911 technology and brings back

information

- visit kiosks in places like hotel lobbies, Walmart automotive section, or museums; kiosk can print out maps and information; bring in printouts
- install modem card and software
- install sound card, speakers, software, screen saver
- cop cars with laptop; student brought cop and car to class
- PBX wiring closet on campus
- establish a help desk for a lab and let students run it for a week
- bring motherboard, hard drive, modem card, external modem, SIMMS chips, disks, tape, CD-ROM

Software activities

- demo installing software using 3.5" disks then CD-ROM noting time differences
- morphing - buy inexpensive package and let students change one object into another and explain underlying technology
- virtual reality and medicine
- medical speaker talks about sending x-rays over telephone lines to another location; what technology is involved?
- games such as hearts or chess--how do you play someone across campus?
- students scan photo of self into their resume

- *Internet* - provider such as Netscape
  - * research and construct a class home page
  - * demonstrate searches for information on the Internet
  - * download files, print files
  - * build list of http:// sites -- xerox, distribute, add to
- integrate MS Excel, Access, Word, Powerpoint
- mail merge with special stationery
- e-mail activities: debate the code of ethics and privacy issues, also the first amendment as it relates to banning certain vocabulary and graphics on the *Internet* and e-mail

<u>Other activities</u>

- use lots of "real world" applications (Muehsam, Muehsam, & Sweeney, 1996)
- make a checklist for current hardware and software on market; students select their "ideal" home computer based on their needs and financial resources
- bar code scanning, especially as it relates to retail selling, price changes, inventory; investigate purchasing a software program to print bar codes and let students produce their own bar codes
- find out how much it would cost to purchase 25 pagers and give them to patrons of a restaurant when they are placed on the "wait" list for available

seating; how would you justify the cost of purchasing pagers?

- short tour to a restaurant such as Applebee's to see how wait staff use a touch screen to input orders into the computer and initiate printing out checks
- build film library: Bill Gates-Tycoon, Using the Internet, Phone Fraud, etc.
- have students use a word processor to answer discussion questions on tests
- give pop-quizzes on computer and have students take them on their own and send answers to me by e-mail
- set up *Internet* chat page and continue a class after class hours where all go on line and respond to additional questions

"Technology is always changing and higher education needs to change with it." (Autodesk, 1995, p.15). To keep up with high-tech advances takes time, training, and financial resources. Colleges and universities constantly juggle their financial dollars to support faculty, build computer labs, buy hardware and software as best they can. We as faculty can begin by admitting that we don't know everything and view new advances as inevitable. We may be the victim of technology's planned obsolence in some cases. However, in spite of changes, I try to keep an open mind, develop a healthy amount of curiosity, and ask for help when I can't figure out how something works.

"It is incumbent on all of us to share tools and ideas. Then perhaps we can achieve a curriculum of continuity and interactivity that makes for truly effective teaching

and learning experiences for our students" (Boettcher, 1995, p.12). Let's look toward the future and plan how technologies can support teaching and learning.

References

Autodesk (1995, Oct). Technology changes. Syllabus p.15.

Baumann, Susan K. & Flynn, Meredith (1996). Microcomputers & Information Technology. New York: West Publishing.

Boettcher, Judith (1995, Oct). Technology Classrooms, Teaching, & Tigers. Syllabus 10-12.

Burk, Tom (1996, Mar.). Christian Brothers University Retention Newsletter, Retain. 1-2.

Gardner, John (1996, Mar). University of South Caroling National Resource Center for the Freshman Year Experience & Students in Transition, Newsletter. 1-10.

Muehsam, Valerie P.; Muehsam, Mitchell, & Sweeney, Vernon (1995). Student Evaluations in Unpopular Courses: Turning "Negatives" into "Positives". Working paper - School of Business, Sam Houston State University. 9-13.

Wade, Jim (1991, Dec.). Networking the CBU Campus. Working paper - School of Business, Christian Brothers University.